# Serum iron parameters, HFE C282Y genotype, and cognitive performance in older adults: results from the FACIT study

**TABLE 3**

Associations between iron parameters and cognitive performance at baseline in healthy older adults*

| Cognitive performance indices | *n* | Standardized regression coefficient ($\beta$) | | | | | |
|---|---|---|---|---|---|---|---|
| | | Serum iron | *p* | Ferritin | *p* | Non-transferrin bound iron | *p* |
| Memory | 794 | -0.019 | 0.807 | 0.002 | 0.951 | 0.070 | 0.362 |
| Sensorimotor speed | 789 | -0.185 | 0.012 | -0.073 | 0.033 | 0.141 | 0.054 |
| Complex speed | 788 | -0.081 | 0.296 | -0.077 | 0.019 | 0.081 | 0.266 |
| Information processing speed | 791 | -0.109 | 0.141 | -0.069 | 0.046 | 0.078 | 0.291 |
| Word fluency | 794 | -0.050 | 0.519 | -0.062 | 0.092 | 0.057 | 0.462 |

* Adjusted for the covariates age, sex, level of education, alcohol consumption, smoking, body mass index, physical activity, *APOE* E4 carrier status, serum C-reactive protein, and hemoglobin concentration in hierarchical linear regression analyses.

**TABLE 4**

Longitudinal associations between iron parameters and cognitive performance over 3 years of follow-up in healthy older adults[*]

| Cognitive performance indices | *n* | Parameter estimate for longitudinal effect | | | | | |
|---|---|---|---|---|---|---|---|
| | | Serum iron | *p* | Ferritin | *p* | Non-transferrin bound iron[†] | *p* |
| Memory | 800 | 0.002 | 0.307 | -0.001 | 0.292 | 0.000 | 0.965 |
| Sensorimotor speed | 799 | 0.001 | 0.396 | 0.000 | 0.806 | 0.001 | 0.925 |
| Complex speed | 798 | -0.002 | 0.086 | -0.001 | 0.221 | -0.016 | 0.052 |
| Information processing speed | 799 | 0.001 | 0.501 | 0.000 | 0.578 | -0.005 | 0.446 |
| Word fluency | 800 | 0.002 | 0.215 | 0.000 | 0.991 | 0.018 | 0.121 |

[*] Adjusted for the covariates age, sex, level of education, alcohol consumption, smoking, body mass index, physical activity, *APOE* E4 carrier status, serum C-reactive protein, and hemoglobin concentration in linear mixed models.

[†] Non-transferrin bound iron was measured at baseline only. Memory, *n*=794; sensorimotor speed, *n*=793; complex speed, *n*=792; information processing speed, *n*=793; word fluency, *n*=794.

**TABLE 5 [optional]**

Cross-sectional and longitudinal (3-year) associations between the *HFE* C282Y mutation and cognitive performance in healthy older adults*

| Cognitive performance indices | Cross-sectional analyses | | | Longitudinal analyses | |
|---|---|---|---|---|---|
| | *n* | Standardized regression coefficient *(β)* | *p* | Parameter estimate for longitudinal effect | *p* |
| Memory | 753 | -0.033 | 0.332 | -0.005 | 0.845 |
| Sensorimotor speed | 748 | -0.003 | 0.930 | -0.024 | 0.183 |
| Complex speed | 748 | 0.029 | 0.389 | -0.022 | 0.343 |
| Information processing speed | 750 | -0.010 | 0.772 | -0.009 | 0.659 |
| Word fluency | 753 | -0.003 | 0.943 | -0.031 | 0.376 |

* Displayed are the standardized regression coefficients (*β*) for the *HFE* C282Y mutation (0=wildtype, 1=C282Y homozygous/heterozygous) in hierarchical linear regression analyses and the parameter estimates for the longitudinal effect of the *HFE* C282Y mutation in linear mixed models. Cross-sectional and longitudinal associations were adjusted for the covariates age, sex, level of education, alcohol consumption, smoking, body mass index, physical activity, *APOE* E4 carrier status, serum C-reactive protein, and hemoglobin concentration.